REMARKS / ARGUMENTS

In complete response to the Office Action dated December 28, 2009, on the above identified application, reconsideration is respectfully requested. Claims 9 to 12 are pending in this application.

Applicants respectfully request continued examination of Claims 9 to 12 and allowance of all pending claims.

Claim Rejections Under 35 U.S.C. § 103:

Claims 9 to 11 (and presumably 12) stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Grenier et al '980 in view of Grenier '142. This rejection is respectfully traversed.

The Examiner notes that "the broadest reasonable interpretation of "mixing column" employed by the rejection (a column in which mixing may occur)" is reasonable. The Examiner further notes that citing from a secondary source such as a different patent is not sufficiently compelling to define the term "mixing column", and that Applicant must rely on the specification of the instant application in order to "be his own lexicographer".

Applicants respectfully point out that the term "mixing column" is a term of art well known and understood by one of ordinary skill in the art of cryogenic air separation. As ancillary evidence of this, Applicants provide the following in the attached Information Disclosure Statement::

"Separation Devices for Gas Mixing", Rakesh Agrawal and Jianguo Xu, 1995;

"ICO Developments or Low Purity Oxygen Manufacture", Colleen Prince and James Flaherty, 1995;

"Air Separation Design for IGCC – Future Directions", A.R. Smith and E.J. Noga, 1996;

"Optimized Steel Production with Oxygen for Blast Furnaces at ILVA, Taranto Works, Italy", L. Capogrosso, G. Zinno, and H. Gasser-Coze, 2003;

"Advanced Integration Concepts for Oxygen Plants and Gas Turbines in Gasification / IGCC Facilities", A.R. Smith, J. Klosek, and W. Woodward, 1996.

Applicants will also demonstrate this by citing the instant application. The Examiner notes that "providing a further column in which mixing may occur is also standard practice for the purpose of separating further components such as argon." The instant specification states, with reference to Figure 1, that "The column system of an air separation unit is formed by a medium-pressure column 100 thermally coupled with a low-pressure column 200 having a minaret, a mixing column 300, and an optional argon column (not illustrated)." (*page 7, lines 11 – 15*). The skilled reader would clearly see that Applicants are obviously distinguishing the "mixing column" from an "argon column".

Applicants had previously defined a mixing column as a "countercurrent contact column in which a more easily volatile gaseous fraction is sent opposite a more poorly volatile liquid." Referring to Figure 1, and the specification (*page 8, lines 19 – 30*), the reader finds gaseous air (stream 122) being sent opposite of oxygen rich liquid (stream 35). The gaseous air stream is more easily volatile than the more poorly volatile oxygen rich liquid. The direct contact between these two streams of different volatility, results in the production of a gaseous oxygen stream (37) and a liquid bottom stream (41). Thus, this definition of a mixing column is substantiated by the instant specification.

In any case, one skilled in the art at the time that the present invention was made, would recognize that a *mixing* column, irrespective of any nuances in the definition, requires direct contact between two different streams. There must be mixing. The column identified in Grenier '142 as a 'mixing column' by the Examiner (column 31) does not mix any two streams together. There are only two inlet streams; the rich liquid from the HP column (stream 35) and the argon branch connection feed (stream 32). Applicants see no other inlet streams to column 31.

Grenier '143 clearly states that stream 35 enters "a condenser 34 in which rich liquid, expanded at 35 to near atmospheric pressure, is vaporized and then returned into the column 11 via a conduit 36." (column 4, line 66 – column 5, line 2). Hence they are not in contact. No mixing takes place, whether this is what one skilled in the art would recognize as a mixing column or not. Hence column 31 can not be a *mixing* column.

Hence the rejection as it pertains to claim 9 is improper. As claims 10 to 12 are dependent upon claim 9, the rejection is improper with respect to them as well.

Claims 9 to 11 (and presumably 12) stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Mostello '598 in view of Grenier '142. This rejection is respectfully traversed.

The Examiner notes that "Mostello does not explicitly teach that the high pressure air is purified or a mixing column in which air from at least one of the turbines is sent." As discussed above, Grenier '142 fails to remedy this deficiency. Hence the rejection as it pertains to claim 9 is improper. As claims 10 to 12 are dependent upon claim 9, the rejection is improper with respect to them as well

CONCLUSION

Accordingly, it is believed that the present application now stands in condition for allowance. Early notice to this effect is earnestly solicited. Should the Examiner believe a telephone call would expedite the prosecution of the application, he is invited to call the undersigned attorney at the number listed below.

Respectfully submitted,

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Date: **February 25, 2010**

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